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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,936	07/14/2003	Andreas Bacher	WAS 0595 PUS	6648
22045 7590 01/31/2008 BROOKS KUSHMAN P.C. 1000 TOWN CENTER TWENTY-SECOND FLOOR SOUTHFIELD, MI 48075				
EXAMINER				
RONESL VICKEY M				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
01/31/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/618,936

**Applicant(s)**

BACHER ET AL.

**Examiner**

Vickey Ronesi

**Art Unit**

1796

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4-7,10-17,21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-7,10-17,21 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/3/2007 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

### ***Claim Rejections - 35 USC § 103***

3. Claims 1, 4-7, 10-17, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schilling et al (US 4,879,336) in view of Maruyama et al (US 4,617,239).

Schilling et al discloses a coating slip composition for printing bases such as paper (col. 2, lines 27-30) prepared by the method disclosed in col. 3, lines 22-44, wherein the composition comprises a cobinder polymer containing 50-95 wt % vinyl alcohol units, 5-50 wt % of 1-alkylvinyl alcohol units of 1-4 alkyl carbon atoms, and 0-5 wt % of other polymerizable monomers (col. 2, lines 36-65) which is preferably fully saponified with a Hoppler viscosity of 4-10 mPas (col. 1, line 61 to col. 2, line 4; Table 1 in col. 5). The vinyl alcohol units and alkylvinyl alcohol units are derived from hydrolyzed vinyl esters, e.g., vinyl acetate and isoprenyl acetate (col. 3, lines 23-26; col. 4, lines 34-37).

Schilling et al does not disclose the use of an ethylenically unsaturated silane-containing monomer, however, note that it is open to the use of any suitable additional monomer (col. 2, lines 45-46).

Maruyama et al discloses a paper coating agent and teaches that a modified polyvinyl alcohol containing silicon (co. 3, line 12 to col. 6, line 28) imparts water resistance, printability, surface strength, and barrier properties to a coated paper (col. 1, lines 9-40; col. 2, lines 8-13) when present in an amount of 0.01-10 mol % of the polyvinyl alcohol (col. 2, lines 58-61). It is presumed that the improvement in the aforementioned properties is due to a reaction between the silicon portion of the modified PVOH with the paper substrate which provides for a firm uniform surface layer that does not penetrate into the paper (col. 9, line 8-26).

Given that Schilling et al is open to the use of another monomer and given the benefits of utilizing an ethylenically unsaturated silane-containing monomer in a PVOH binder for paper applications as taught by Maruyama et al, it would have been obvious to one of ordinary skill in the art to utilize a silane-containing monomer in the polyvinyl alcohol of Schilling et al.

With respect to claim 15, note that the phrase "suitable for use in ink jet printing" is in intended use which is given no patentable weight. Regardless, it is considered that it would have been obvious to one of ordinary skill in the art to utilize Schilling et al's paper in such a common paper printing application, there being no evidence or suggestion otherwise.

#### ***Response to Arguments***

4. Applicant's arguments filed on 10/3/2007 have been fully considered but they are not persuasive. Specifically, applicant argues that the instant claims are reasonably commensurate in

scope with the data in the application as originally filed to establish surprisingly and unexpectedly that the addition of 1-methylvinyl acetate comonomers to silane-containing polymers provides improved storage stability and abrasion resistance

In response, the data in the specification as originally filed cannot serve to establish unexpected or surprising results for five reasons.

First, the inventive example contains isopropenyl acetate rather than claimed 1-methylvinyl acetate.

Second, the inventive example contains vinyl triethoxy silane for the "silane-containing, ethylenically unsaturated monomers." Case law holds that evidence is insufficient to rebut a *prima facie* case if not commensurate in scope with the claimed invention. *In re Grasselli*, 713 F.2d 731, 741, 218 USPQ 769, 777 (Fed. Cir. 1983).

Third, the relative amounts of monomer are not reasonably commensurate in scope with the scope of the claims. Case law holds that whether the unexpected results are the result of unexpectedly improved results or a property not taught by the prior art, the "objective evidence of nonobviousness must be commensurate in scope with the claims which the evidence is offered to support." In other words, the showing of unexpected results must be reviewed to see if the results occur over the entire claimed range (i.e., scope). *In re Clemens*, 622 F.2d 1029, 1036, 206 USPQ 289, 296 (CCPA 1980), MPEP 716.02(d).

Fourth, the inventive and comparative examples are not proper side-by-side examples because the copolymer of the comparative example is only defined in the specification as originally filed as a "[c]ommercial silane-containing polyvinyl alcohol." While applicant defines the "[c]ommercial silane-containing polyvinyl alcohol" as Kuraray Poval(R) R-1130, such is not

considered evidence because it is not in the form of a declaration filed under 37 CFR 1.132. Even if a declaration had been filed, the data is not a proper side-by-side comparison to inventive Example 1 because the relative amounts of comonomer are not given.

Fifth, the data is only for a coating slip and cannot establish criticality for the polymer alone.

### *Conclusion*

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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/VASUDEVAN S JAGANNATHAN/  
Supervisory Patent Examiner, Art Unit 1796